ATSDR's Substance-Specific Priority Data Needs – Filled		
Substances	**PDN Description**	**Status[1]**
Aldrin/Dieldrin	• Dose-response data in animals for intermediate[2]-duration oral exposure	Filled
Arsenic	• Exposure levels in humans living near hazardous waste sites and other populations, such as exposed workers	Filled
Benzene	• Epidemiologic studies on the health effects of benzene (Special emphasis end points include immunotoxicity) • Exposure levels in humans living near hazardous waste sites and other populations, such as exposed workers	Filled
Beryllium	• Analytical methods to determine environmental speciation • Exposure levels in humans living near hazardous waste sites and other populations, such as exposed workers	Filled
Cadmium	• Analytical methods for biological tissues and fluids and environmental media • Exposure levels in humans living near hazardous waste sites and other populations, such as exposed workers	Filled
Carbon tetrachloride	• Immunotoxicology battery of tests via oral exposure • Half-life in soil • Exposure levels in humans living near hazardous waste sites and other populations, such as exposed workers	Filled
Chlordane	• Oral multigenerational studies to evaluate reproductive toxicity	Filled

Chloroform	• Dose-response data in animals for intermediate-duration oral exposure • Epidemiologic studies on the health effects of chloroform (Special emphasis end points include cancer, neurotoxicity, reproductive and developmental toxicity, hepatotoxicity, and renal toxicity) • Exposure levels in humans living near hazardous waste sites and other populations, such as exposed workers	Filled
Chromium	• Exposure levels in humans living near hazardous waste sites and other populations, such as exposed workers	Filled
Cyanide	• Evaluation of the environmental fate of cyanide in soil	Filled
1,1-Dichloroethene	• Dose-response data in animals for acute[3]-duration exposure by the inhalation route • Dose-response data in animals for chronic[4]-duration exposure by the inhalation route	Filled
DDT	• Epidemiologic studies on the health effects of DDT, DDD, and DDE (Special emphasis end points include immunotoxicity, reproductive and developmental toxicity) • Exposure levels in humans living near hazardous waste sites and other populations, such as exposed workers	Filled
Di(2-ethylhexyl) phthalate	• Comparative toxicokinetic studies (Studies designed to examine how primates metabolize and distribute DEHP as compared with rodents via oral exposure)	Filled
Di-n-butyl phthalate	• Dose-response data in animals for acute- duration exposure via the oral route • Carcinogenicity studies via oral exposure • *In vivo* genotoxicity studies • Immunotoxicology studies via oral exposure • Neurotoxicity studies via oral exposure	Filled
Disulfoton	• Immunotoxicology testing battery following oral exposure	Filled

Heptachlor/ heptachlor epoxide	• Multigeneration reproductive toxicity studies via the oral route of exposure • Prenatal developmental toxicity studies via the oral route of exposure	Filled
Hexachloro-cyclohexane (α, β, and γ)	• Dose-response data for chronic-duration oral exposure • Exposure levels in humans living near hazardous waste sites and other populations, such as exposed workers	Filled
Lead	• Mechanistic studies on the neurotoxic effects of lead • Analytical methods for tissue levels • Exposure levels in humans living near hazardous waste sites and other populations, such as exposed workers	Filled
Manganese	• Dose-response data for acute- and intermediate-duration oral exposures (the intermediate-duration study should include reproductive histopathology and an evaluation of immunologic parameters including manganese effects on plaque-forming cells (SRBC), surface markers (D4:D8 ratio), and delayed hypersensitivity reactions) • Toxicokinetic studies on animals to investigate uptake and absorption, relative uptake of differing manganese compounds, metabolism of manganese, and interaction of manganese with other substances following oral exposure • Epidemiological studies on the health effects of manganese (Special emphasis end points include neurologic, reproductive, developmental, immunologic, and cancer)	Filled
Mercury	• Multigeneration reproductive toxicity study via oral exposure • Dose-response data in animals for chronic-duration oral exposure • Exposure levels in humans living near hazardous waste sites and other populations, such as exposed workers	Filled
Methoxychlor	• Evaluate neurologic effects after long-term, low-level oral exposure	Filled

Methylene chloride	• Dose-response data in animals for acute- and intermediate-duration oral exposure. The intermediate-duration study should include extended reproductive organ histopathology, neuropathology, and immunopathology • Prenatal developmental toxicity study via the oral route • Exposure levels in humans living near hazardous waste sites and other populations, such as exposed workers	Filled
Nickel	• Epidemiologic studies on the health effects of nickel (Special emphasis end points include reproductive toxicity) • Prenatal developmental toxicity study via the oral route • Exposure levels in humans living near hazardous waste sites and other populations, such as exposed workers	Filled
Polychlorinated biphenyls (PCBs)	• Epidemiologic studies on the health effects of PCBs (Special emphasis end points include immunotoxicity, gastrointestinal toxicity, liver toxicity, kidney toxicity, thyroid toxicity, and reproductive/developmental toxicity) • Exposure levels in humans living near hazardous waste sites and other populations, such as exposed workers • Chronic toxicity and oncogenicity via oral exposure[5] • Aerobic PCB biodegradation in sediment[5] • PCB congener analysis[5]	Filled
Polycyclic aromatic hydrocarbons (PAHs) **(Includes 15 substances)**	• Dose-response data in animals for intermediate-duration oral exposures. The intermediate-duration study should include extended reproductive organ histopathology and immunopathology • Prenatal developmental toxicity study via inhalation or oral exposure • Mechanistic studies on PAHs, on how mixtures of PAHs can influence the ultimate activation of PAHs, and on how PAHs affect rapidly proliferating tissues • Dose-response data in animals for acute- and intermediate-duration inhalation exposures. The intermediate-duration study should include extended reproductive organ histopathology and immunopathology • Epidemiologic studies on the health effects of PAHs (Special emphasis end points include cancer, dermal, hemolymphatic,and hepatic toxicity) • Exposure levels in humans living near hazardous waste sites and other populations, such as exposed workers	Filled

Selenium	• Epidemiologic studies on the health effects of selenium (Special emphasis end points include cancer, reproductive and developmental toxicity, hepatotoxicity, and adverse skin effects) • Exposure levels in humans living near hazardous waste sites and other populations, such as exposed workers	Filled
Tetrachloroethylene	• Dose-response data in animals for acute-duration oral exposure, including neuropathology and demeanor, and immunopathology • Exposure levels in humans living near hazardous waste sites and other populations, such as exposed workers	Filled
Toluene	• Dose-response data in animals for acute- and intermediate-duration oral exposures. The intermediate-duration study should include an extended histopathologic evaluation of the immune system • Comparative toxicokinetic studies (Characterization of absorption, distribution, and excretion) via oral exposure • Mechanism of toluene-induced neurotoxicity • Exposure levels in humans living near hazardous waste sites and other populations, such as exposed workers	Filled
Trichloroethylene	• Dose-response data in animals for acute-duration oral exposure • Epidemiologic studies on the health effects of trichloroethylene (Special emphasis end points include cancer, hepatotoxicity, renal toxicity, developmental toxicity, and neurotoxicity) • Exposure levels in humans living near hazardous waste sites and other populations, such as exposed workers	Filled
Vinyl chloride	• Dose-response data in animals for acute-duration inhalation exposure • Multigeneration reproductive toxicity study via inhalation • Prenatal developmental toxicity study via inhalation	Filled
Zinc	• Dose-response data in animals for acute- and intermediate-duration oral exposures. The intermediate-duration study should include an extended histopathologic evaluation of the immunologic and neurologic systems	Filled

(1) Filled: A priority data need is filled:

- If it has been referred to one of the implementation mechanisms and research has been initiated (Exception: priority data needs referred to EPA [i.e., included in the EPA/ATSDR test rule] and/or ATSDR Voluntary Research Program remain as priority data needs until the studies have been completed, peer reviewed and accepted by ATSDR), OR

- If an updated ATSDR toxicological profile contains relevant new studies, or if other relevant, peer-reviewed, and publicly available new studies (not included in the toxicological profile) have been identified since the finalization of the priority data needs document; and based on such studies, it is generally agreed that a priority data need has been filled.

Furthermore, in the event a priority data need is considered *filled*, it does not necessarily mean that the study has been completed and that ATSDR has accepted the data. It does, however, indicate that the agency no longer considers it a priority to initiate additional studies at this time.

(2) Intermediate-duration exposure = 15 – 364 days.

(3) Acute-duration exposure = 14 days or less.

(4) Chronic-duration exposure = 365 days or more.

(5) A data need, not a priority data need.